

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (currently amended) Solid-A solid comprising a single layer of tungsten oxide on a support of zirconia and/or titanium dioxide, characterised in that wherein the amount of tungsten has tetrahedral coordination before and after calcination having a tetrahedral form deposited on the support is between 10% to 25% by weight relative to the total mass of the support, and wherein the solid is obtained by anion exchange between the zirconia and/or the titanium dioxide and peroxotungstic acid in an acid medium having a pH lower than 3.

2. (currently amended) Solid-The solid according to claim 1, characterised in that wherein:

- a) the tungsten has tetrahedral coordination before and after calcination; and
- b) the specific surface-area of the solid, after heating to a temperature of less than 800°C, preferably less than 700°C, in particular less than or in the order of 600°C, is between 50 and 300m<sup>2</sup>/g, more particularly between 65 and 200m<sup>2</sup>/g, advantageously between 86 and 150m<sup>2</sup>/g.

3. (currently amended) Solid—The solid according to claim 1,  
characterised in thatwherein:

- \_\_\_\_ a) the tungsten has a tetrahedral coordination, before and after calcination;
- \_\_\_\_ b) the specific surface-area of the solid, after heating to a temperature of less than 800°C, preferably less than 700°C, in particular less than or in the order of 600°C, is between 50 and 300m<sup>2</sup>/g, more particularly between 65 and 200m<sup>2</sup>/g, advantageously between 86 and 150m<sup>2</sup>/g;
- \_\_\_\_ c) the solid has a total acidity, measured by means of adsorption of ammonia, of between 0.1 and 0.5mmol/g, preferably between 0.2 and 0.4mmol/g, advantageously approximately 0.35mmol/g of solid, after heating to a temperature of less than 800°C, preferably less than 700°C, in particular less than or in the order of 600°C.

4-5. (cancelled)

6. (currently amended) Solid—The solid according to claim 1,  
characterised in thatwherein the support is a zirconia support.

7. (currently amended) Solid—The solid according to claim 1,  
characterised in that it further comprises—further comprising one or more metals selected from the group consisting of platinum, rhodium, cobalt, palladium, nickel and iron.

8. (currently amended) ~~Solid~~ The solid according to any one of the preceding claims claim 1, characterised in that it having an activation and/or regeneration temperature is less than 800°C, more particularly less than 700°C, advantageously in the order of or less than 600°C.

9. (currently amended) Process A process for preparing a ~~the~~ solid according to claim 1, characterised in that wherein a single layer of  $\text{WO}_4^{2-}$  ions is deposited on a the zirconia support.

10. (currently amended) Process A process according to claim 9, characterised in that it comprisescomprising the steps of:  
       oxidising tungstic acid into peroxotungstic acid ( $\text{H}_2\text{W}_2\text{O}_{11}$ );  
       exchanging anions in an acid medium of preferably less than pH 3 between the solution of peroxotungstic acid obtained in this manner and a hydrated zirconia ( $\text{ZrO}_2$ ) and/or hydrated titanium dioxide ( $\text{TiO}_2$ ) support; and  
       recovering the tungsten/zirconia and/or titanium dioxide solid.

11. (currently amended) Process according to claim 9, characterised in that it comprisescomprising the steps of:  
       oxidising hydrated tungsten trioxide ( $\text{WO}_3$ ) in the presence of an oxidation agent;

\_\_\_\_\_ exchanging anions in an acid medium ~~preferably of less than~~ pH 3 between the solution of peroxotungstic acid obtained in this manner and a hydrated zirconia ( $ZrO_2$ ) and/or titanium dioxide ( $TiO_2$ ) support; and

\_\_\_\_\_ recovering the tungsten/zirconia and/or the titanium dioxide solid.

12. (currently amended) Use ~~of a solid according to claim 1 as a catalyst for~~ A method of catalyzing reactions of oxidation, epoxidation, hydrodesulphuration, isomerisation of paraffins and olefins, hydrogenation of aromatic compounds, oxidation of sulphurous compounds or olefins, said method comprising using the solid according to claim 1 as the catalyst in said rections.

13. (currently amended) Use The method according to claim 12, characterised in that~~wherein~~ the catalysed reaction is an acid-catalysed reaction.

14. (currently amended) Use The method according to claim 12, characterised in that~~wherein~~ the reaction is a catalytic oxidation reaction of sulphurous derivatives, ~~in particular those present in hydrocarbons, before or after refinement.~~

15. (currently amended) Use The method according to claim 12,  
wherein said is for desulphurising hydrocarbons, in particular  
and fuels, for example, petroleums, kerosenes and gas oils.

16. (currently amended) Use The method according to claim 12,  
characterised in thatwherein the reaction is a catalytic  
oxidation reaction of benzothiophenes and/or dibenzothiophenes,  
substituted or non-substituted.

17. (currently amended) Process of A process for  
desulphurisation by oxidising compounds or compositions  
containing sulphurous compounds, characterised in that its  
said process comprises the steps of:

\_\_\_\_ a) bringing the compound or composition to be desulphurised  
into contact with an oxidising agent and a solid comprising a  
single layer of tetrahedral tungsten deposited on a zirconia  
and/or titanium dioxide support;

\_\_\_\_ b) carrying out the oxidation reaction in a suitable  
solvent, preferably at atmospheric pressure and at a suitable  
temperature, preferably between 20°C and the boiling  
temperature of the solvent; and

\_\_\_\_ c) removing the oxidation products from the initial compound  
or composition.

18. (currently amended) Process—The process according to claim 17, characterised in thatwherein the support is a zirconia support.

19. (currently amended) Process—The process according to claim 17, characterised in thatwherein the compounds or the compositions to be desulphurised are refined or non-refined products resulting from the distillation of crude petroleum, in particular hydrocarbons and especially fuels, in particular petroleums, kerosenes and and/or gas oils, more specifically gas oils.

20. (currently amended) Process—The process according to claim 17, characterised in thatwherein the compounds are thiophenic derivatives, in particular benzothiophenes, dibenzothiophenes and and/or their derivatives thereof, in particular that are optionally substituted.

21. (currently amended) Process—The process according to claim 17, characterised in thatwherein the oxidising agent is selected from the peroxides, in particular hydrogen peroxide or tert-butyl hydroperoxide, these—said oxidising agents being able to be used alone or in admixture.

22. (currently amended) Process—The process according to claim 17, characterised in thatwherein the solvent of the reaction is selected from the compound or composition to be processed, water, alkanes, alkanols, and/or polar solvents, these said solvents being able to be used alone or in admixture.

23. (currently amended) Process—The process according to claim 17, characterised in that itwherein said process is carried out in a homogeneous, heterogeneous, monophase, bi-phase or tri-phase medium.

24. (currently amended) Process—The process according to claim 17, characterised in thatwherein the ratio of oxidant/compounds to be oxidised is between 100/1 and 1/100, preferably between 100/1 and 1/1, further preferably between 20/1 and 1/1 and quite particularly between 10/1 and 2/1.

25. (currently amended) Process—The process according to claim 17, characterised in thatwherein the oxidation product is removed from the reaction medium in the course of its formation.

26. (currently amended) Desulphurised—A Desulphurised fuel which is substantially produced according to the process described in claim 17.

27. (currently amended) Fuel The fuel according to claim 26,  
~~characterised in that it~~wherein said fuel is gas oil.

28. (new) The solid according to claim 1, wherein the amount of tungsten, under tetrahedral form, deposited on the surface is between 15% to 25% by weight relative to the total mass of the support.

29. (new) The solid according to claim 2, wherein the temperature of said heating is less than 700°C.

30. (new) The solid according to claim 29, the temperature of said heating is less than 600°C.

31. (new) The solid according to claim 2, wherein the specific surface-area of the solid, after said heating, is between 65 and 200m<sup>2</sup>/g.

32. (new) The solid according to claim 31, wherein the specific surface-area of the solid, after said heating, is between 86 and 150m<sup>2</sup>/g.

33. (new) The solid according to claim 3, wherein the temperature of said heating in b) is less than 700°C.

34. (new) The solid according to claim 33, wherein said heating in b) is at a temperature less than 600°C.

35. (new) The solid according to claim 3, wherein the specific surface-area of the solid, after said heating, is between 65 and 200m<sup>2</sup>/g.

36. (new) The solid according to claim 35, wherein the specific surface-area of the solid, after said heating, is between 86 and 150m<sup>2</sup>/g.

37. (new) The solid according to claim 3, wherein the total acidity in c) is between 0.2 and 0.4 mmol/g.

38. (new) The solid according to claim 37, wherein the total acidity in c) is between 0.2 mmol/g and 0.4 mmol/g.

39. (new) The solid according to claim 38, wherein the total acidity in c) is approximately 0.35 mmol/g.

40. (new) The solid according to claim 38, wherein said heating in c) is at a temperature less than 700°C.

41. (new) The solid according to claim 38, wherein said heating in  
c) is at a temperature less than 600°C.

42. (new) The solid according to claim 8, having an activation  
and/or regeneration temperature less than 700°C.

43. (new) The solid according to claim 42, having an activation  
and/or regeneration temperature less than 600°C.